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Table 1: UK Greenhouse Gas Emissions 1990-2008, headline results

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Greenhouse gas emissions: actual emissions in tonnes

	Units (tonnes)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Net CO ₂ emissions (emissions minus removals)	Million	592.8	600.2	582.9	567.9	561.8	553.1	575.3	551.5	553.6	543.1	551.2	562.6	545.0	556.7	556.3	553.9	551.4	543.6	532.8
Methane (CH ₄)	Million	5.0	4.9	4.9	4.7	4.4	4.3	4.2	4.0	3.8	3.5	3.3	3.0	2.9	2.6	2.5	2.5	2.4	2.3	2.3
Nitrous Oxide (N ₂ O)	Million	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Hydrofluorocarbons (HFC)	Thousand	0.98	1.02	1.06	1.29	1.60	2.12	2.70	3.50	4.00	3.52	3.84	4.31	4.84	5.26	5.52	6.01	6.21	6.35	6.43
Perfluorocarbons (PFC)	Thousand	0.20	0.17	0.08	0.07	0.07	0.06	0.07	0.05	0.05	0.05	0.06	0.05	0.04	0.04	0.05	0.04	0.04	0.03	0.03
Sulphur hexafluoride (SF ₆)	Thousand	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.08	0.06	0.06	0.06	0.05	0.05	0.04	0.03	0.03

Greenhouse gas emissions: weighted by global warming potential (million tonnes carbon dioxide equivalent)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Net CO ₂ emissions (emissions minus removals)	592.8	600.2	582.9	567.9	561.8	553.1	575.3	551.5	553.6	543.1	551.2	562.6	545.0	556.7	556.3	553.9	551.4	543.6	532.8
Methane (CH ₄)	104.4	103.6	102.1	99.1	92.1	91.2	88.8	83.5	79.2	74.0	69.5	63.4	60.4	54.4	52.7	51.5	50.5	49.3	48.7
Nitrous Oxide (N ₂ O)	65.1	65.0	58.5	53.8	54.9	53.5	53.4	54.5	53.9	43.3	42.3	39.8	38.1	37.5	38.0	36.9	35.2	34.7	33.9
Hydrofluorocarbons (HFC)	11.4	11.9	12.3	13.1	14.1	15.5	16.7	19.0	16.8	10.0	8.7	9.3	9.8	10.5	9.6	10.4	10.8	11.0	11.2
Perfluorocarbons (PFC)	1.4	1.2	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Sulphur hexafluoride (SF ₆)	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.2	1.3	1.4	1.8	1.4	1.5	1.3	1.1	1.1	0.9	0.8	0.7
Kyoto greenhouse gas basket	773.8	780.8	756.0	735.1	724.2	714.1	735.1	709.6	705.0	672.2	674.1	677.4	655.8	661.2	659.3	655.2	650.0	640.5	628.3

Notes:

1. Figures for each individual gas include the Land Use, Land-Use Change and Forestry sector (LULUCF). These emissions cover the UK and Crown Dependencies, but exclude emissions from UK Overseas Territories.
2. Kyoto basket total differs slightly from sum of individual pollutants above as the basket uses a narrower definition for the Land Use, Land-Use Change and Forestry sector (LULUCF). This includes emissions from the UK, Crown Dependencies and UK Overseas Territories.
3. Kyoto base year consists of emissions of CO₂, CH₄ and N₂O in 1990, and of HFCs, PFCs and SF₆ in 1995. Includes an allowance for net emissions from LULUCF in 1990.
4. The entire time series is revised each year to take account of methodological improvements in the UK emissions inventory.
5. Emissions are presented as carbon dioxide equivalent in line with international reporting and carbon trading. To convert Carbon dioxide into carbon equivalents, divide figures by 44/12.
6. Figures shown do not include any adjustment for the effect of the EU Emissions Trading Scheme (EUETS), which was introduced in 2005.

Table 2: UK Greenhouse Gas Emissions 1990-2008, breakdown of headline results by geographical coverage

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Million tonnes carbon dioxide equivalent

		Baseline	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008			
United Kingdom only	<i>Excluding net emissions/removals from LULUCF</i>	CO ₂	588.5	595.9	579.2	565.3	559.5	550.3	572.7	549.2	551.7	541.6	550.0	561.7	544.7	556.5	556.8	554.5	551.9	544.1	533.5			
		CH ₄	104.1	103.4	101.8	98.8	91.8	90.9	88.5	83.3	79.0	73.8	69.2	63.2	60.2	54.2	52.6	51.3	50.3	49.1	48.5			
		N ₂ O	65.1	65.0	58.4	53.7	54.9	53.5	53.4	54.4	53.9	43.2	42.2	39.8	38.0	37.5	38.0	36.8	35.2	34.7	33.9			
		HFC	11.4	11.9	12.3	13.1	14.0	15.5	16.7	19.0	16.7	9.9	8.6	9.3	9.7	10.5	9.6	10.4	10.8	10.9	11.2			
		PFC	1.4	1.2	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2		
		SF ₆	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.2	1.3	1.4	1.8	1.4	1.5	1.3	1.1	1.1	0.9	0.8	0.7			
		Total	771.5	778.3	753.5	732.6	721.9	711.8	733.0	707.5	703.0	670.4	672.3	675.8	654.5	660.3	658.5	654.5	649.4	639.8	628.0			
		Net emissions/removals from LULUCF	CO ₂	2.93	2.84	2.28	1.12	0.92	1.24	1.00	0.69	0.08	-0.20	-0.34	-0.46	-0.98	-1.03	-1.77	-1.94	-1.82	-1.89	-1.97		
			CH ₄	0.02	0.02	0.01	0.01	0.01	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.03	
			N ₂ O	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
		<i>Including net emissions/removals from LULUCF</i>	CO ₂	591.4	598.7	581.5	566.5	560.4	551.5	573.7	549.9	551.8	541.4	549.6	561.3	543.7	555.5	555.1	552.6	550.1	542.2	531.5		
			CH ₄	104.1	103.4	101.9	98.8	91.8	90.9	88.5	83.3	79.0	73.8	69.3	63.3	60.2	54.3	52.6	51.4	50.4	49.1	48.6		
			N ₂ O	65.1	65.0	58.4	53.7	54.9	53.5	53.4	54.5	53.9	43.2	42.2	39.8	38.0	37.5	38.0	36.8	35.2	34.7	33.9		
			HFC	11.4	11.9	12.3	13.1	14.0	15.5	16.7	19.0	16.7	9.9	8.6	9.3	9.7	10.5	9.6	10.4	10.8	10.9	11.2		
PFC	1.4		1.2	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2			
SF ₆	1.0		1.1	1.1	1.2	1.2	1.2	1.3	1.2	1.3	1.4	1.8	1.4	1.5	1.3	1.1	1.1	0.9	0.8	0.7				
Total	774.5		781.2	755.8	733.8	722.8	713.1	734.0	708.2	703.1	670.2	672.0	675.4	653.6	659.3	656.7	652.6	647.6	637.9	626.0				
UK Crown Dependencies	<i>Including net emissions/removals from LULUCF</i>		CO ₂	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.7	1.8	1.7	1.6	1.4	1.3	1.2	1.3	1.3	1.3	1.4	1.3		
			CH ₄	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	
			N ₂ O	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			HFC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			PFC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			SF ₆	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
			Total	1.7	1.7	1.7	1.7	1.8	1.8	1.9	2.0	2.1	2.0	1.8	1.6	1.4	1.5	1.5	1.6	1.6	1.7	1.6		
		UK & Crown Dependencies	<i>Excluding net emissions/removals from LULUCF</i>	CO ₂	589.9	597.3	580.7	566.8	561.0	551.9	574.4	550.9	553.6	543.3	551.6	563.2	546.1	557.8	558.2	555.9	553.3	545.6	534.9	
				CH ₄	104.4	103.6	102.1	99.0	92.1	91.1	88.8	83.5	79.2	74.0	69.4	63.4	60.4	54.4	52.7	51.5	50.5	49.2	48.7	
				N ₂ O	65.1	65.0	58.5	53.8	54.9	53.5	53.4	54.5	53.9	43.3	42.3	39.8	38.1	37.5	38.0	36.9	35.2	34.7	33.9	
				HFC	11.4	11.9	12.3	13.1	14.1	15.5	16.7	19.0	16.8	10.0	8.7	9.3	9.8	10.5	9.6	10.4	10.8	11.0	11.2	
				PFC	1.4	1.2	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2
				SF ₆	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.2	1.3	1.4	1.8	1.4	1.5	1.3	1.1	1.1	0.9	0.8	0.7	
				Total	773.2	780.1	755.3	734.4	723.7	713.7	735.0	709.6	705.1	672.4	674.2	677.5	656.1	661.8	660.0	656.1	651.0	641.5	629.6	
Net emissions/removals from LULUCF	CO ₂			2.89	2.81	2.18	1.08	0.86	1.19	0.93	0.61	0.02	-0.25	-0.38	-0.51	-1.05	-1.08	-1.81	-1.98	-1.89	-1.96	-2.04		
	CH ₄			0.02	0.02	0.01	0.01	0.01	0.03	0.02	0.03	0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.03			
	N ₂ O			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00			
<i>Including net emissions/removals from LULUCF</i>	CO ₂			592.8	592.8	600.2	582.9	567.9	561.8	553.1	575.3	551.5	553.6	543.1	551.2	562.6	545.0	556.7	556.3	553.9	551.4	543.6	532.8	
	CH ₄			104.4	103.6	102.1	99.1	92.1	91.2	88.8	83.5	79.2	74.0	69.5	63.4	60.4	54.4	52.7	51.5	50.5	49.3	48.7		
	N ₂ O			65.1	65.0	58.5	53.8	54.9	53.5	53.4	54.5	53.9	43.3	42.3	39.8	38.1	37.5	38.0	36.9	35.2	34.7	33.9		
	HFC			11.4	11.9	12.3	13.1	14.1	15.5	16.7	19.0	16.8	10.0	8.7	9.3	9.8	10.5	9.6	10.4	10.8	11.0	11.2		
	PFC	1.4	1.2	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2			
	SF ₆	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.2	1.3	1.4	1.8	1.4	1.5	1.3	1.1	1.1	0.9	0.8	0.7				
	Total	776.1	782.9	757.5	735.5	724.6	714.9	735.9	710.2	705.1	672.2	673.9	677.0	655.1	660.7	658.2	654.1	649.2	639.6	627.6				
	Overseas Territories	<i>Excluding net emissions/removals from LULUCF</i>	Total	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.1		
			Net emissions/removals from LULUCF for Kyoto (uses different basis to UK figure)	-0.9	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	-1.7	-1.9	-1.9	-2.0	-2.0	-2.3	-2.5	-2.7	-2.9	-3.1	-3.3	-3.4		
	Kyoto Basket total (baseline taken from the Assigned Amount Report)		779.9	773.8	780.8	756.0	735.1	724.2	714.1	735.1	709.6	705.0	672.2	674.1	677.4	655.8	661.2	659.3	655.2	650.0	640.5	628.3		

Notes:

1. Kyoto basket total differs slightly from sum of individual pollutants above as the basket uses a narrower definition for the Land Use, Land-Use Change and Forestry sector (LULUCF). These emissions cover the UK and Crown Dependencies, but exclude emissions from UK Overseas Territories.
2. Kyoto base year consists of emissions of CO₂, CH₄ and N₂O in 1990, and of HFCs, PFCs and SF₆ in 1995. Includes an allowance for net emissions from LULUCF in 1990.
3. The entire time series is revised each year to take account of methodological improvements in the UK emissions inventory. The baseline and target figures will therefore also change each year, although the percentage reductions required to meet the targets are fixed.
4. Emissions are presented as carbon dioxide equivalent in line with international reporting and carbon trading. To convert Carbon dioxide into carbon equivalent, divide figures by 44/12.
5. Figures shown do not include any adjustment for the effect of the EU Emissions Trading Scheme (EUETS), which was introduced in 2005.

Public		31.2	34.5	36.2	29.7	29.0	28.3	29.0	26.5	25.2	24.2	23.3	24.0	21.5	21.5	22.3	22.1	22.0	21.1	21.3
Residential Total		168.4	178.8	172.3	167.9	160.0	153.5	165.7	150.7	156.9	151.5	155.7	162.5	156.8	159.4	160.5	156.4	156.1	149.9	152.6
Residential	Residential combustion	157.2	177.5	171.0	166.5	158.5	151.7	163.6	148.0	153.4	148.2	152.0	158.7	153.0	155.3	156.4	151.8	151.5	145.3	148.1
	Use of non aerosol consumer products	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5
	Accidental vehicle fires	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Aerosols and metered dose inhalers	0.0	0.0	0.0	0.0	0.1	0.4	0.8	1.4	2.1	1.9	2.2	2.4	2.4	2.6	2.7	3.0	3.0	3.0	3.0
Agriculture Total		65.2	64.7	62.8	61.8	62.6	62.4	62.7	62.7	61.6	60.8	58.3	55.7	55.9	55.1	55.0	54.7	52.8	51.7	51.1
Agriculture	Stationary and mobile combustion	9.7	9.7	9.5	9.3	9.2	9.2	9.2	8.8	8.6	8.4	8.1	8.4	8.4	8.3	8.1	8.0	7.7	7.5	7.4
	Breakdown of pesticides	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Enteric Fermentation	Cattle	13.7	13.4	13.5	13.5	13.6	13.5	13.7	13.0	12.9	12.5	12.0	11.9	12.0	12.1	12.4	12.1	12.1	11.8	11.8
	Sheep	4.4	4.4	4.4	4.4	4.4	4.3	4.3	4.4	4.5	4.2	3.7	3.6	3.6	3.6	3.5	3.5	3.4	3.3	3.3
	Goats	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Horses	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Pigs	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1
	Deer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wastes	Cattle	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8
	Sheep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Goats	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Horses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pigs	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.2	1.2	1.1	1.0	0.9	0.8	0.7	0.8	0.7	0.7	0.7	0.7
	Poultry	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	Deer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	Manure liquid systems	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Manure solid storage and dry lot	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.4
	Other manure management (N2O)	0.8	0.8	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6
	Direct Soil Emission	30.4	30.2	28.6	28.1	28.8	29.0	29.1	30.1	29.1	28.5	27.4	25.7	26.3	25.7	25.6	25.2	24.0	23.3	23.3
	Field burning of agricultural wastes	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Process Total		56.8	55.0	49.5	45.8	47.4	47.0	47.9	49.5	46.0	28.9	25.3	23.3	19.7	20.3	19.6	18.6	17.5	18.8	17.5
Industrial Process	Sinter production	3.0	2.7	2.9	2.9	2.9	3.0	3.1	3.1	3.0	3.2	2.8	2.6	2.3	2.6	2.6	2.6	2.3	2.6	2.3
	Cement production	7.3	6.0	5.5	5.5	6.4	6.3	6.4	6.7	6.8	6.5	6.3	5.8	6.0	5.9	6.0	5.9	5.9	6.1	5.2
	Lime production	1.2	1.1	1.1	1.1	1.0	1.2	1.3	1.7	1.6	1.6	1.3	1.0	0.8	0.9	0.8	0.8	0.7	0.9	0.9
	Limestone and dolomite use	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.4	1.4	1.3	1.2	1.1	1.0	1.1	1.2	1.1	1.3	1.2	1.2
	Soda ash production and use	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Fletton bricks	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2
	Ammonia production	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.0	1.2	1.2	1.4	1.5	1.3	1.2	1.3	1.2	0.9	1.3	1.2
	Iron and steel	3.7	3.2	3.0	3.0	2.9	3.2	3.6	3.5	3.1	3.2	2.9	2.0	1.6	2.0	2.1	2.2	2.2	2.5	3.0
	Aluminium production	1.8	1.6	0.9	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.7	0.6	0.7	0.6	0.6
	Nitric acid production	3.9	3.9	4.1	4.1	3.0	2.8	2.9	2.8	3.2	4.8	4.4	3.4	2.1	2.3	2.6	2.0	1.8	1.8	1.5
	Adipic acid production	20.7	20.9	16.1	12.1	13.4	12.0	11.9	12.2	12.0	0.6	1.2	1.4	0.5	0.5	0.9	0.8	0.6	1.0	0.9
	Other - Chemical industry	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Halocarbon production	11.4	11.9	12.3	12.8	13.3	14.1	14.4	15.7	12.2	4.9	2.6	2.4	2.1	2.0	0.5	0.6	0.5	0.2	0.1
	Magnesium cover gas	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	1.1	0.8	0.8	0.7	0.4	0.3	0.2	0.2	0.1
Land Use Change		2.9	2.8	2.2	1.1	0.9	1.2	1.0	0.6	0.0	-0.2	-0.4	-0.5	-1.0	-1.0	-1.8	-2.0	-1.9	-1.9	-2.0
Forest Land	Biomass burning	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.2	0.2
	Land converted to forest land	-12.2	-12.7	-13.3	-13.7	-14.2	-13.9	-13.7	-13.5	-13.4	-13.5	-13.8	-14.3	-15.0	-15.6	-16.3	-15.7	-15.2	-14.3	-13.8
	Direct N2O emission from N fertilisation of forest land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cropland	Land converted to cropland	0.8	1.0	1.0	0.6	0.7	0.8	0.9	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4
	Cropland remaining cropland	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5
	Biomass burning	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Land converted to cropland	14.0	14.0	14.1	14.1	14.1	14.1	14.1	14.1	14.2	14.2	14.2	14.2	14.2	14.2	14.3	14.3	14.3	14.3	14.3
Grassland	Biomass burning	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
	Liming	0.7	0.8	0.8	0.5	0.6	0.7	0.6	0.7	0.5	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3
	Grassland remaining grassland	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.4	0.3	0.4	0.4	0.5	0.3	0.5	0.4	0.4	0.4	0.3	0.3
	Land converted to grassland	-7.2	-7.3	-7.4	-7.6	-7.7	-7.8	-7.9	-8.0	-8.1	-8.1	-8.1	-8.1	-8.2	-8.3	-8.5	-8.5	-8.6	-8.8	-8.9
Settlements	Biomass burning	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Land converted to settlements	7.0	6.9	6.8	6.8	6.7	6.7	6.6	6.6	6.6	6.5	6.4	6.4	6.4	6.3	6.3	6.3	6.2	6.2	6.2
	Harvested wood	-1.7	-1.4	-1.1	-1.0	-0.8	-1.0	-1.2	-1.4	-1.5	-1.5	-1.3	-0.8	-0.3	0.0	0.4	-0.1	-0.5	-1.3	-1.7
Other	Crown Dependencies	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	-0.1	-0.1	-0.1
Waste Management		52.9	52.1	50.9	49.5	48.5	46.9	45.5	41.8	39.3	36.1	34.1	30.1	27.7	24.6	23.1	22.9	22.8	22.8	22.7
Waste Management	Landfill	49.8	49.0	47.6	46.6	45.6	44.2	42.7	39.3	36.8	33.7	31.6	27.5	25.2	22.1	20.6	20.3	20.3	20.3	20.2
	Waste-water handling	1.7	1.7	1.8	1.8	1.9	1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
	Waste Incineration	1.4	1.4	1.3	1.2	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Exports		10.3	11.4	12.3	13.9	14.3	15.4	17.0	18.2	17.7	15.8	15.1	14.9	16.8	17.2	18.4	18.8	16.2	17.2	15.5
Grand total		776.1	782.9	757.5	735.5	724.6	714.9	735.9	710.2	705.1	672.2	673.9	677.0	655.1	660.7	658.2	654.1	649.2	639.6	627.6

Table 5: Estimated emissions of methane (CH₄) by National Communication source category, type of fuel and end-user category, 1990-2008

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United Kingdom		Thousand tonnes																		
NC Category	More Detail	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
(a) By source																				
Energy Supply Total		1,371.3	1,385.5	1,373.0	1,297.8	1,017.2	1,073.2	1,017.4	968.9	882.6	789.7	724.5	696.1	685.2	547.6	534.5	482.1	450.1	397.8	396.4
Energy Supply	Power Stations	2.7	2.6	2.5	2.5	2.6	2.7	2.7	2.6	2.8	2.9	3.0	3.3	3.3	3.4	3.4	3.7	3.8	3.9	4.1
	Refineries	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4
	Manufacture of solid fuels and other energy industries	6.5	6.5	6.6	6.8	8.1	8.1	8.8	9.0	10.0	9.8	9.0	9.6	9.9	9.0	9.6	8.8	7.0	7.5	7.1
	Coal mining and handling	870.0	894.5	886.5	825.0	547.1	599.0	555.6	532.1	453.9	380.3	332.8	301.3	301.5	259.4	234.4	194.3	179.9	125.7	132.5
	Solid fuel transformation	0.9	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Exploration production, transport	44.8	43.3	43.6	40.0	40.8	51.6	43.4	34.9	26.5	15.4	15.4	14.6	13.8	12.2	11.0	10.0	8.5	9.7	8.6
	Natural gas leakage	378.8	373.9	369.0	364.2	359.2	354.3	349.0	330.8	327.7	328.0	314.6	316.6	316.6	223.3	230.9	229.7	217.8	208.1	206.3
	Flaring	25.0	23.7	23.8	21.7	21.7	23.3	24.1	22.2	22.3	20.3	20.9	18.6	16.9	15.3	15.2	16.6	15.2	15.9	12.4
	Venting	42.0	39.7	39.8	36.3	36.4	33.0	32.5	36.1	38.1	32.0	27.6	31.1	22.2	23.9	29.1	18.0	17.0	26.1	24.5
Business Total		15.8	15.9	14.9	15.0	15.7	16.0	16.3	16.5	16.1	15.9	15.6	14.5	13.3	14.2	13.8	13.6	13.6	13.4	12.5
Business	Iron and steel - combustion	8.8	8.9	8.5	8.5	8.6	8.8	9.0	9.4	8.9	8.5	7.8	6.7	6.0	6.8	6.6	6.7	7.0	6.8	6.1
	Other industrial fuel combustion	5.2	4.9	4.6	4.6	5.2	5.3	5.6	5.7	5.8	5.8	6.1	6.1	5.8	5.7	5.6	5.4	5.1	5.1	4.9
	Commercial and miscellaneous industrial combustion	1.9	2.0	1.9	1.9	1.9	1.9	1.8	1.3	1.5	1.6	1.7	1.7	1.6	1.7	1.6	1.6	1.5	1.5	1.5
Transport Total		30.6	30.4	29.4	27.9	26.0	24.2	22.7	20.9	19.2	17.6	15.4	13.3	11.9	10.7	9.7	8.7	8.0	7.3	6.5
Aviation	Civil aviation (Domestic, Landing and take off)	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Civil aviation (Domestic, Cruise)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Road	Passenger cars	22.3	22.1	21.6	20.2	18.7	17.3	16.1	14.7	13.4	12.2	10.4	8.8	7.8	6.7	5.9	5.2	4.7	4.2	3.8
	Light duty vehicles	2.0	1.9	1.8	1.8	1.7	1.5	1.4	1.3	1.2	1.0	0.8	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2
	Buses	1.3	1.4	1.4	1.4	1.3	1.3	1.2	1.1	1.0	0.8	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.3
	HGVs	3.3	3.3	3.2	3.3	3.1	2.9	2.7	2.5	2.3	2.1	2.0	1.9	1.8	1.7	1.7	1.6	1.5	1.3	1.1
	Mopeds & motorcycles	1.2	1.1	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.6
Railways	Railways - stationary combustion	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	National navigation	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
	Military Aircraft and shipping	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Other Transportation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public	Aircraft - support vehicles	1.3	1.4	1.5	1.4	1.4	1.4	1.5	1.4	1.3	1.2	1.1	1.2	1.1	1.0	1.1	1.1	1.0	0.9	1.0
Residential Total		69.4	72.4	66.5	65.8	51.7	38.8	41.9	38.7	40.3	43.0	32.8	29.6	24.6	23.0	22.0	20.0	20.6	22.2	24.0
Residential	Residential combustion	69.3	72.3	66.4	65.7	51.6	38.7	41.8	38.7	40.2	42.9	32.7	29.5	24.5	22.9	21.9	19.9	20.6	22.2	24.0
	Accidental vehicle fires	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Agriculture Total		1,061.6	1,045.5	1,048.4	1,041.0	1,046.7	1,033.7	1,044.0	1,013.1	1,013.4	1,010.5	968.8	909.9	898.4	898.0	904.7	915.5	898.8	893.1	872.0
Agriculture	Stationary and mobile combustion	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1
Enteric Fermentation	Cattle	651.7	639.7	644.7	642.2	647.8	641.4	653.0	621.1	614.4	616.4	595.7	570.4	565.2	569.6	574.2	591.1	574.6	577.1	564.1
	Sheep	208.5	207.2	208.0	208.8	207.8	205.1	202.5	204.9	211.0	212.9	202.2	177.3	173.7	172.9	173.4	165.9	166.4	160.8	156.4
	Goats	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5
	Horses	3.6	3.8	3.8	4.4	4.6	4.8	5.1	5.5	5.6	5.0	5.2	5.2	5.5	5.4	5.9	6.2	7.0	6.9	6.7
	Pigs	11.3	11.6	11.6	11.8	11.8	11.4	11.4	12.1	12.2	11.0	9.7	8.8	8.4	7.6	7.7	7.0	7.4	7.3	7.1
	Deer	0.4	0.4	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Wastes	Cattle	102.3	99.8	99.8	99.5	100.5	98.7	100.3	94.0	92.6	93.6	90.0	86.6	86.7	86.7	86.9	92.3	89.0	87.8	85.6
	Sheep	5.0	4.9	5.0	5.0	4.9	4.9	4.8	4.9	5.0	5.1	4.8	4.2	4.1	4.1	3.9	4.0	3.8	3.7	3.7
	Goats	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Horses	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
	Pigs	53.3	54.4	54.5	55.5	55.8	53.9	53.6	57.1	57.4	51.6	45.8	41.3	39.5	35.6	36.4	33.2	34.8	34.1	33.3
	Poultry	10.7	10.9	10.7	11.2	11.2	11.0	10.9	11.1	12.8	12.7	13.0	13.7	13.0	13.7	13.5	13.3	13.1	12.8	12.7
	Deer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Field burning		12.7	10.8	7.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Process Total		11.4	10.8	11.3	10.1	11.7	9.8	11.0	9.5	7.6	6.8	6.3	5.7	5.5	6.7	6.5	5.9	5.8	6.4	6.0
Industrial Process	Sinter production	1.4	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.2	1.2	1.1	1.2	1.2	1.0	1.1	1.0	0.9
	Fletton Bricks	1.1	0.9	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.8	0.9	0.8
	Other - Chemical industry	8.1	8.0	8.6	7.6	8.9	6.8	8.0	6.6	4.8	4.0	3.8	3.5	3.5	4.4	4.1	3.5	3.2	3.6	3.2
	Metal production	0.8	0.5	0.5	0.4	0.6	0.7	0.8	0.7	0.6	0.7	0.7	0.4	0.3	0.6	0.7	0.8	0.7	0.9	1.0
Land Use Change		0.8	0.9	0.6	0.6	0.6	1.4	1.0	1.2	0.9	0.8	1.2	1.5	1.3	1.2	1.2	0.9	1.4	1.4	1.3
Forest Land	Biomass burning	0.2	0.3	0.1	0.2	0.1	1.0	0.5	0.7	0.4	0.1	0.2	0.3	0.2	0.2	0.3	0.1	0.6	0.7	0.7
Grassland	Biomass burning	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.6	0.8	0.7	0.6	0.6	0.6	0.5	0.4	0.4
Settlements	Biomass burning	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3
Waste Management Total		2,409.0	2,372.4	2,317.0	2,257.2	2,213.1	2,142.6	2,072.4	1,908.4	1,791.3	1,640.1	1,541.9	1,349.0	1,235.4	1,088.5	1,016.6	1,004.5	1		

	Fuel Oil	1.9	1.8	1.7	1.6	1.5	1.3	1.2	0.9	0.7	0.7	0.4	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4
	Orimulsion	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Burning Oil	0.8	0.9	0.9	1.0	1.0	1.0	1.3	1.3	1.3	1.2	1.3	1.4	1.2	1.2	1.3	1.2	1.3	1.2	1.2
	Aviation Turbine Fuel	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Other Petroleum Products	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Gaseous fuels		26.0	26.6	25.9	26.5	28.2	28.8	31.5	31.7	32.6	32.5	31.8	31.1	30.0	30.6	31.3	30.2	27.9	28.1	27.5
	Petroleum Gases	0.8	0.8	0.8	0.9	1.2	1.1	0.9	0.8	0.8	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5
	Natural Gas	13.9	14.8	14.9	15.5	16.7	17.2	19.5	19.5	20.9	21.3	21.1	21.9	22.1	21.5	22.3	21.0	18.6	18.7	18.7
	Other Gases	11.3	10.9	10.2	10.1	10.3	10.5	11.0	11.3	10.9	10.5	10.0	8.4	7.4	8.5	8.4	8.6	8.8	8.9	8.3
Other emissions		4,841.9	4,803.4	4,738.8	4,595.0	4,276.3	4,247.5	4,131.6	3,886.7	3,680.5	3,433.0	3,228.7	2,948.0	2,811.7	2,528.3	2,449.1	2,395.1	2,349.9	2,289.9	2,263.5
Grand Total		4,971.2	4,935.2	4,862.7	4,716.7	4,384.2	4,341.0	4,228.2	3,978.5	3,772.6	3,525.7	3,307.5	3,020.8	2,876.6	2,590.9	2,510.0	2,452.4	2,405.1	2,346.3	2,319.8

(c) By final user (emissions estimates in 2008 were revised on 14 April 2010)

Business Total		621.8	610.8	592.4	568.2	435.9	473.5	439.5	432.0	387.8	351.6	327.2	310.7	309.1	250.9	238.5	217.0	204.0	173.2	173.6
Business	Iron and steel - combustion and electricity	61.0	58.6	56.7	57.3	52.0	56.2	54.9	56.4	49.3	44.0	34.1	30.5	25.8	24.2	23.1	21.1	20.7	17.3	16.9
	Other industrial combustion and electricity	391.0	379.1	366.1	342.7	260.6	280.0	255.1	247.8	223.3	203.5	194.0	183.5	186.3	146.8	139.2	127.6	118.7	102.1	100.6
	Commercial and miscellaneous industrial combustion	169.8	173.1	169.6	168.2	123.2	137.3	129.5	127.8	115.3	104.1	99.2	96.7	97.0	79.9	76.2	68.2	64.6	53.8	56.1
Transport Total		105.4	100.0	100.7	94.4	92.9	96.2	89.7	83.9	80.2	69.7	65.0	65.5	59.1	51.9	49.9	43.5	39.7	43.1	38.1
Aviation	Civil aviation (Domestic, Landing and take off)	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2
	Civil aviation (Domestic, Cruise)	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4
Road	Passenger cars	63.3	60.5	61.4	56.3	55.8	57.2	53.3	49.6	47.4	41.6	38.6	38.7	34.6	29.8	28.4	24.2	21.6	23.5	20.7
	Light duty vehicles	7.3	7.2	7.1	6.6	6.9	7.3	6.9	6.7	6.7	5.8	5.5	5.8	5.1	4.6	4.6	4.0	3.7	4.3	3.8
	Buses	3.4	3.5	3.4	3.2	3.2	3.4	3.1	2.9	2.8	2.5	2.3	2.3	2.1	2.0	1.9	1.7	1.6	1.7	1.4
	HGVs	16.2	14.8	15.0	14.1	15.0	15.4	14.4	13.4	12.7	10.5	9.8	10.0	9.1	8.1	7.9	7.2	6.7	7.4	6.4
	Mopeds & motorcycles	1.5	1.5	1.2	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.8	
	LPG emissions (all vehicles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Railways	Railways	5.6	5.6	5.6	6.9	4.8	5.5	5.1	4.9	4.5	3.9	3.6	3.5	3.5	2.9	2.9	2.6	2.5	2.2	2.2
	Railways - stationary combustion	1.7	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Shipping	National navigation	2.2	2.2	2.2	1.9	1.8	1.9	1.9	1.7	1.6	1.2	1.1	1.0	0.7	1.1	1.0	1.0	1.2	1.3	1.2
	Other Mobile	3.1	2.4	2.3	2.1	2.1	2.2	2.0	1.7	1.5	1.3	1.1	1.2	1.1	1.0	1.0	0.8	0.7	0.8	0.8
	Other Transportation	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Aircraft - support vehicles																			
Public		83.0	92.0	100.0	78.9	61.4	65.0	61.6	57.0	49.7	44.9	39.5	38.0	36.2	28.0	28.5	26.5	25.2	21.3	21.8
Residential Total		554.6	579.8	568.1	542.6	416.5	402.6	394.4	353.9	334.8	309.6	276.3	268.7	264.6	207.7	203.4	186.6	177.8	156.6	161.7
Residential	Residential combustion	554.6	579.8	568.1	542.6	416.5	402.6	394.3	353.9	334.7	309.5	276.2	268.6	264.6	207.6	203.3	186.6	177.7	156.5	161.7
	Accidental vehicle fires	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Agriculture Total		1,074.5	1,058.5	1,061.2	1,052.7	1,055.8	1,043.5	1,053.0	1,021.4	1,020.9	1,017.1	974.7	916.2	904.7	905.0	909.7	919.8	902.7	896.6	875.4
Agriculture	Stationary and mobile combustion	14.1	14.1	13.9	13.0	10.3	11.0	10.2	9.5	8.8	7.7	7.1	7.5	7.5	6.2	6.1	5.5	5.1	4.6	4.6
Enteric Fermentation	Cattle	651.7	639.7	644.7	642.2	647.8	641.4	653.0	621.1	614.4	616.4	595.7	570.4	565.2	569.6	574.2	591.1	574.6	577.1	564.1
	Sheep	208.5	207.2	208.0	208.8	207.8	205.1	202.5	204.9	211.0	212.9	202.2	177.3	173.7	172.9	173.4	165.9	166.4	160.8	156.4
	Goats	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	
	Horses	3.6	3.8	3.8	4.4	4.6	4.8	5.1	5.5	5.6	5.0	5.2	5.2	5.5	5.4	5.9	6.2	7.0	6.9	6.7
	Pigs	11.3	11.6	11.6	11.8	11.8	11.4	11.4	12.1	12.2	11.0	9.7	8.8	8.4	7.6	7.7	7.0	7.4	7.3	7.1
	Deer	0.4	0.4	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Wastes	Cattle	102.3	99.8	99.8	99.5	100.5	98.7	100.3	94.0	92.6	93.6	90.0	86.6	86.7	86.7	86.9	92.3	89.0	87.8	85.6
	Sheep	5.0	4.9	5.0	5.0	4.9	4.9	4.8	4.9	5.0	5.1	4.8	4.2	4.1	4.1	4.1	3.9	4.0	3.8	3.7
	Goats	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Horses	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	
	Pigs	53.3	54.4	54.5	55.5	55.8	53.9	53.6	57.1	57.4	51.6	45.8	41.3	39.5	35.6	36.4	33.2	34.8	34.1	33.3
	Poultry	10.7	10.9	10.7	11.2	11.2	11.0	10.9	11.1	12.8	12.7	13.0	13.7	13.0	13.7	13.5	13.3	13.1	12.8	12.7
	Deer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Field burning	Field burning	12.7	10.8	7.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Process Total		80.3	78.2	78.2	76.9	62.7	67.2	69.0	70.7	59.6	54.5	46.4	36.0	31.9	28.8	26.9	23.2	21.4	19.1	20.0
Industrial Process	Sinter production	8.7	7.9	8.4	8.6	6.8	7.7	7.5	8.1	7.1	6.8	5.5	4.8	4.4	3.9	3.7	3.2	2.8	2.4	2.3
	Fletton Bricks	1.1	0.9	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.8	0.9	0.8
	Ammonia Production	8.9	8.3	8.4	7.5	7.0	6.5	5.5	4.1	4.2	4.2	4.2	3.3	3.2	2.1	2.1	2.1	1.7	2.1	1.9
	Other - Chemical industry	8.1	8.0	8.6	7.6	8.9	6.8	8.0	6.6	4.8	4.0	3.8	3.5	3.5	4.4	4.1	3.5	3.2	3.6	3.2
	Metal production	53.6	53.0	52.0	52.5	39.3	45.4	47.3	51.1	42.8	38.8	32.4	23.8	20.2	17.9	16.4	13.9	12.9	10.1	11.8
Land Use Change		0.8	0.9	0.6	0.6	0.6	1.4	1.0	1.2	0.9										

Table 7: Estimated combined emissions of F-Gases by National Communication source and end-user category: 1990-2008

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United Kingdom		Mt CO ₂ e																		
NC Category	More Detail	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
(a) By source																				
Energy Supply Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Total		0.7	0.7	0.8	1.1	1.5	2.0	2.5	3.0	3.5	4.0	4.7	5.3	6.2	6.6	7.4	7.9	8.2	8.5	8.7
Business	Refrigeration and air conditioning	0.0	0.0	0.0	0.3	0.6	0.9	1.3	1.8	2.3	3.0	3.6	4.1	4.6	5.2	5.7	6.2	6.6	7.0	7.3
	Foams	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.3	0.5	0.4	0.4	0.4	0.4
	Firefighting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2
	Solvents	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
	One Component Foams	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Electronics, electrical insulation and sporting goods	0.7	0.7	0.8	0.8	0.8	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.9	0.8	0.7	0.7
Transport Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Public		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Total		0.0	0.0	0.0	0.0	0.1	0.4	0.8	1.4	2.1	1.9	2.2	2.4	2.4	2.6	2.7	3.0	3.0	3.0	3.0
Residential	Aerosols and metered dose inhalers	0.0	0.0	0.0	0.0	0.1	0.4	0.8	1.4	2.1	1.9	2.2	2.4	2.4	2.6	2.7	3.0	3.0	3.0	3.0
Agriculture Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Process Total		13.1	13.4	13.2	13.6	14.1	14.8	15.1	16.3	12.8	5.8	4.0	3.4	3.1	2.8	1.1	0.9	0.8	0.5	0.4
Industrial Process	Aluminium production	1.3	1.1	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1
	Halocarbon production	11.4	11.9	12.3	12.8	13.3	14.1	14.4	15.7	12.2	4.9	2.6	2.4	2.1	2.0	0.5	0.6	0.5	0.2	0.1
	Magnesium cover gas	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	1.1	0.8	0.8	0.7	0.4	0.3	0.2	0.2	0.1
Land Use Change		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Waste Management		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand total		13.8	14.1	14.0	14.8	15.7	17.2	18.4	20.6	18.4	11.8	10.9	11.1	11.6	12.1	11.1	11.8	12.0	12.0	12.1

Notes:

1. The entire time series is revised each year to take account of methodological improvements in the UK emissions inventory.
2. These figures include emissions from the UK and Crown Dependencies, but exclude emissions from Overseas Territories.
3. There is no difference between source and end-user emissions for F-gases.

Table 8: Greenhouse gas emissions arising from use of fuels from UK international aviation and shipping bunkers

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Memo item	Gas	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
International aviation bunkers	Carbon dioxide	15.61	15.33	16.95	18.16	18.91	20.10	21.27	22.61	25.18	27.34	30.15	29.39	28.87	29.55	32.41	35.13	35.56	35.42	34.10
	Methane	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Nitrous oxide	0.15	0.15	0.17	0.18	0.19	0.20	0.21	0.22	0.25	0.27	0.30	0.29	0.28	0.29	0.32	0.35	0.35	0.35	0.34
	Total	15.77	15.490	17.126	18.345	19.101	20.305	21.482	22.840	25.435	27.617	30.453	29.679	29.156	29.847	32.728	35.474	35.917	35.766	34.441
International shipping bunkers	Carbon dioxide	6.68	6.46	6.75	6.68	6.25	6.71	7.33	8.22	8.97	6.50	5.72	6.42	5.35	4.79	5.72	5.73	6.69	6.74	7.46
	Methane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Nitrous oxide	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.07	0.05	0.04	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.06
	Total	6.73	6.510	6.803	6.735	6.300	6.761	7.390	8.287	9.044	6.554	5.767	6.469	5.390	4.825	5.770	5.775	6.743	6.794	7.517
Grand Total		22.50	22.00	23.93	25.08	25.40	27.07	28.87	31.13	34.48	34.17	36.22	36.15	34.55	34.67	38.50	41.25	42.66	42.56	41.96

Note: Memo items refer to the categories not included in the national total that is reported to the IPCC. These are included in the Greenhouse Gas Inventory but do not count towards the UK totals as reported to the IPCC.

Units: Million tonnes carbon dioxide equivalent (Mt CO₂eq)

Geographic Scope: United Kingdom, Isle of Man, Jersey and Guernsey. Excludes all overseas territories.

Table 9: UK Greenhouse Gas Emissions 1990-2008, progress towards the Kyoto and Domestic Targets

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			Baseline	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Million tonnes carbon dioxide equivalent						
Kyoto Protocol greenhouse gas target	No allowance for EU ETS	All greenhouse gases (including net emissions/removals from LULUCF)	779.9	773.8	780.8	756.0	735.1	724.2	714.1	735.1	709.6	705.0	672.2	674.1	677.4	655.8	661.2	659.3	655.2	650.0	640.5	628.3			
		Percentage change from baseline			0.1%	-3.1%	-5.7%	-7.1%	-8.4%	-5.7%	-9.0%	-9.6%	-13.8%	-13.6%	-13.1%	-15.9%	-15.2%	-15.5%	-16.0%	-16.7%	-17.9%	-19.4%			
	EU ETS	Net purchases/(sales) by UK installations																			27.1	33.2	27.5	19.9	
		Net purchases/(sales) by UK Government																			(1.9)	(1.9)	(1.9)	-	
		Net UK purchases/(sales)																			25.2	31.3	25.6	19.9	
	With allowance for EU ETS	All greenhouse gases (including net emissions/removals from LULUCF)	779.9	773.8	780.8	756.0	735.1	724.2	714.1	735.1	709.6	705.0	672.2	674.1	677.4	655.8	661.2	659.3	630.1	618.7	614.9	608.4			
	Percentage change from baseline			0.1%	-3.1%	-5.7%	-7.1%	-8.4%	-5.7%	-9.0%	-9.6%	-13.8%	-13.6%	-13.1%	-15.9%	-15.2%	-15.5%	-19.2%	-20.7%	-21.2%	-22.0%				
United Kingdom Carbon Budgets	No allowance for EU ETS	All greenhouse gases (including net emissions/removals from LULUCF)	777.4																				626.0		
		Percentage change from baseline																						-19.5%	
	EU ETS	Net purchases/(sales) by UK installations																							19.3
		Net purchases/(sales) by UK Government																							-
		Net UK purchases/(sales)																							19.3
	With allowance for EU ETS	All greenhouse gases (including net emissions/removals from LULUCF)	777.4																					606.7	
	Percentage change from baseline																							-22.0%	
United Kingdom Domestic CO₂ goal	No allowance for EU ETS	CO ₂ (including net emissions/removals from LULUCF)	592.8	592.8	600.2	582.9	567.9	561.8	553.1	575.3	551.5	553.6	543.1	551.2	562.6	545.0	556.7	556.3	553.9	551.4	543.6	532.8			
		Percentage change from baseline			1.2%	-1.7%	-4.2%	-5.2%	-6.7%	-3.0%	-7.0%	-6.6%	-8.4%	-7.0%	-5.1%	-8.1%	-6.1%	-6.2%	-6.6%	-7.0%	-8.3%	-10.1%			
	EU ETS	Net purchases/(sales) by UK installations																							27.1
		Net purchases/(sales) by UK Government																							(1.9)
		Net UK purchases/(sales)																							25.2
	With allowance for EU ETS	CO ₂ (including net emissions/removals from LULUCF)	592.8	592.8	600.2	582.9	567.9	561.8	553.1	575.3	551.5	553.6	543.1	551.2	562.6	545.0	556.7	556.3	528.8	520.2	518.1	512.9			
	Percentage change from baseline			1.2%	-1.7%	-4.2%	-5.2%	-6.7%	-3.0%	-7.0%	-6.6%	-8.4%	-7.0%	-5.1%	-8.1%	-6.1%	-6.2%	-10.8%	-12.3%	-12.6%	-13.5%				

Notes:

1. Kyoto base year consists of emissions of CO₂, CH₄ and N₂O in 1990, and of HFCs, PFCs and SF₆ in 1995. Includes an allowance for net emissions from LULUCF in 1990.
2. Emissions are presented as carbon dioxide equivalent in line with international reporting and carbon trading. To convert Carbon dioxide into carbon equivalent, divide figures by 44/12.
3. UK Carbon Budgets were introduced in 2008. Figures include emissions solely from the UK and exclude emissions from Crown Dependencies and UK Overseas Territories. Figures include the Land Use, Land-Use Change and Forestry sector (LULUCF).
4. The UK Domestic CO₂ goal includes emissions from the UK and Crown Dependencies but excludes emissions from UK Overseas Territories. Figures include the Land Use, Land-Use Change and Forestry sector (LULUCF).
5. The Kyoto Protocol target includes emissions from the UK, Crown Dependencies and UK Overseas Territories. The target uses a narrower definition for the Land Use, Land-Use Change and Forestry sector (LULUCF).
6. The entire time series is revised each year to take account of methodological improvements in the UK emissions inventory. However, the baseline used for the Kyoto Protocol and Carbon Budgets are fixed and therefore do not change when methodological changes are made to the inventory.

Table 10: Uncertainty in estimates and Global Warming Potential ⁴ (GWP) of UK Greenhouse Gas emissions: 1990/2008[Back to index page](#)

Pollutant	GWP ³	1990 emissions ⁵ (thousand tonnes CO ₂ equivalent)	2008 emissions ⁵	Uncertainty ¹ in 2008 emissions	Percentage change	Range of likely % change		
					between 2008 and 1990	between 2008 and 1990 ⁴ 2.5 percentile	97.5 percentile	
Carbon dioxide	² CO ₂	1	593,392	534,507	2%	-10%	-12%	-8%
Methane	CH ₄	21	104,600	48,932	23%	-53%	-56%	-50%
Nitrous Oxide	N ₂ O	310	65,091	33,843	252%	-55%	-73%	-33%
Hydrofluorocarbons	HFC	140 - 11,700	11,392	11,231	25%	-1%	-24%	24%
Perfluorocarbons	PFC	6,500 - 9,200	1,402	209	24%	-85%	-88%	-82%
Sulphur hexafluoride	SF ₆	23,900	1,030	712	16%	-30%	-43%	-16%
All greenhouse gases weighted by GWP			776,907	629,435	14%	-19%	-21%	-17%

Source: AEA

¹ Expressed as a percentage relative to the mean value 2008 emissions). Calculated as $2s/E$ where s is the standard deviation and E is the mean.

² Carbon dioxide emissions are net emissions. Total emissions minus removals.

³ The GWP of a greenhouse gas measures its effectiveness in global warming over 100 years relative to CO₂.

⁴ Equivalent to a 95 per cent probability that the percentage change between 1990 and 2008 is between the two values shown. Values include uncertainties for overseas territories data.

⁵ 1990 and 2008 emissions are expressed as the central estimate from the Monte Carlo analysis of uncertainties

Table 11: Sectoral definitions and inclusions

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National Communication category	IPCC category	Source Name	
Business	1A2a_Manufacturing_Industry&Construction:I&S	Blast furnaces Iron and steel - combustion plant	
	1A2f_Manufacturing_Industry&Construction:Other	Ammonia production - combustion Autogenerators Cement production - combustion Lime production - non decarbonising Other industrial combustion	
	1A2fii_Manufacturing_Industry&Construction:Off-road	Industrial engines Industrial off-road mobile machinery	
	1A4a_Commercial/Institutional	Miscellaneous industrial/commercial combustion	
	2B5_Carbon from NEU of products	Other industrial combustion	
	2F1_Refrigeration_and_Air_Conditioning_Equipment	Commercial Refrigeration Domestic Refrigeration Industrial Refrigeration Mobile Air Conditioning Refrigerated Transport Stationary Air Conditioning	
	2F2_Foam_Blowing	Foams	
	2F3_Fire_Extinguishers	Firefighting	
	2F5_Solvents	Other PFC use Precision cleaning - HFC	
	2F9_Other_(one_component_foams)	One Component Foams	
	2F9_Other_(semiconductors_electrical_sporting_goods)	Electrical insulation Electronics - PFC Electronics - SF6 Sporting goods	
	Residential	1A4b_Residential	Domestic combustion
		1A4bii_Residential:Off-road	House and garden machinery
		2B5_Chemical_Industry_Other	Non-aerosol products - household products
2F4_Aerosols		Aerosols - halocarbons Metered dose inhalers	
6C_Waste_Incineration		Accidental fires - vehicles	
Transport	1A3aii_Civil_Aviation_Domestic	Aircraft - domestic cruise Aircraft - domestic take off and landing	
	1A3b_Road_Transportation	Road transport - all vehicles LPG use Road transport - buses and coaches - motorway driving Road transport - buses and coaches - rural driving Road transport - buses and coaches - urban driving Road transport - cars - cold start Road transport - cars - motorway driving Road transport - cars - rural driving Road transport - cars - urban driving Road transport - cars non catalyst - cold start Road transport - cars non catalyst - motorway driving Road transport - cars non catalyst - rural driving Road transport - cars non catalyst - urban driving Road transport - cars with catalysts - cold start Road transport - cars with catalysts - motorway driving Road transport - cars with catalysts - rural driving Road transport - cars with catalysts - urban driving Road transport - HGV articulated - motorway driving Road transport - HGV articulated - rural driving Road transport - HGV articulated - urban driving Road transport - HGV rigid - motorway driving Road transport - HGV rigid - rural driving Road transport - HGV rigid - urban driving Road transport - LGVs - cold start Road transport - LGVs - motorway driving Road transport - LGVs - rural driving Road transport - LGVs - urban driving Road transport - LGVs non catalyst - cold start Road transport - LGVs non catalyst - motorway driving Road transport - LGVs non catalyst - rural driving Road transport - LGVs non catalyst - urban driving Road transport - LGVs with catalysts - cold start Road transport - LGVs with catalysts - motorway driving Road transport - LGVs with catalysts - rural driving Road transport - LGVs with catalysts - urban driving Road transport - mopeds (<50cc 2st) - urban driving Road transport - motorcycle (>50cc 2st) - rural driving Road transport - motorcycle (>50cc 2st) - urban driving Road transport - motorcycle (>50cc 4st) - motorway driving Road transport - motorcycle (>50cc 4st) - rural driving Road transport - motorcycle (>50cc 4st) - urban driving Road vehicle engines	
	1A3c_Railways	Railways - freight Railways - intercity Railways - regional	
	1A3dii_National_Navigation	Marine engines Shipping - coastal	
	1A3e_Other_Transportation	Aircraft - support vehicles	
	1A4a_Commercial/Institutional	Railways - stationary combustion	
	1A5b_Other:Mobile	Aircraft - military Shipping - naval	

Agriculture	1A4ci_Agriculture/Forestry/Fishing:Stationary	Agriculture - stationary combustion Miscellaneous industrial/commercial combustion	
	1A4cii_Agriculture/Forestry/Fishing:Off-road	Agricultural engines Agriculture - mobile machinery	
	2B5_Chemical_Industry_Other	Agriculture - agrochemicals use	
	4A10_Enteric_Fermentation_Deer	Agriculture livestock - deer enteric	
	4A1a_Enteric_Fermentation_Dairy	Agriculture livestock - dairy cattle enteric	
	4A1b_Enteric_Fermentation_Non-Dairy	Agriculture livestock - other cattle enteric	
	4A3_Enteric_Fermentation_Sheep	Agriculture livestock - sheep enteric	
	4A4_Enteric_Fermentation_Goats	Agriculture livestock - goats enteric	
	4A6_Enteric_Fermentation_Horses	Agriculture livestock - horses enteric	
	4A8_Enteric_Fermentation_Swine	Agriculture livestock - pigs enteric	
	4B12_Liquid_Systems	Agriculture livestock - manure liquid systems	
	4B13_Solid_Storage_and_Drylot	Agriculture livestock - manure solid storage and dry lot	
	4B14_Other	Agriculture livestock - manure other	
	4B1a_Manure_Management_Dairy	Agriculture livestock - dairy cattle wastes	
	4B1b_Manure_Management_Non-Dairy	Agriculture livestock - other cattle wastes	
	4B3_Manure_Management_Sheep	Agriculture livestock - sheep goats and deer wastes	
	4B4_Manure_Management_Goats	Agriculture livestock - goats wastes	
	4B6_Manure_Management_Horses	Agriculture livestock - horses wastes	
	4B8_Manure_Management_Swine	Agriculture livestock - pigs wastes	
	4B9_Manure_Management_Poultry	Agriculture livestock - broilers wastes Agriculture livestock - laying hens wastes Agriculture livestock - other poultry wastes	
	4B10_Manure_Management_Deer	Agriculture livestock - deer wastes	
	4D_Agricultural_Soils	Agricultural soils	
	4F1_Field_Burning_of_Agricultural_Residues	Field burning	
	4F5_Field_Burning_of_Agricultural_Residues	Field burning	
	Land Use Change	5A_Forest Land (Biomass Burning - wildfires)	Forest Land - Biomass burning
		5A_Forest Land (Drainage of soils)	Forest Land - Drainage of Organic Soils
		5A1_Forest Land Remaining Forest Land	Forest Land remaining Forest Land
5A2_Forest Land (N fertilisation)		Direct N2O emission from N fertilisation of forest land	
5A2_Land Converted to Forest Land		Land converted to Forest Land	
5B_Cropland (Biomass Burning - controlled)		Cropland - Biomass Burning	
5B_Liming		Cropland - Liming	
5B1_Cropland Remaining Cropland		Cropland remaining Cropland	
5B2_Land Converted to Cropland		Land converted to Cropland	
5C_Grassland (Biomass burning - controlled)		Grassland - Biomass Burning	
5C_Liming		Grassland - Liming	
5C1_Grassland Remaining Grassland		Grassland remaining Grassland	
5C2_Land converted to grassland		Land converted to Grassland	
5D_Wetlands (Biomass burning - controlled)		Wetlands - Biomass Burning	
5D1_Wetlands remaining wetlands		Wetlands remaining Wetland	
5D2_Land converted to wetlands		Land converted to Wetland	
5E_Settlements (Biomass burning - controlled)		Settlements - Biomass Burning	
5E1_Settlements remaining settlements		Settlements remaining Settlements	
5E2_Land converted to settlements		Land converted to Settlements	
5F_Other land (Biomass burning - controlled)		Other Land - Biomass Burning	
5F1_Other land remaining other land		Other Land remaining Other Land	
5F2_Land converted to other land	Land converted to Other Land		
5G_Other (Harvested wood)	Harvested Wood Products		
Energy Supply	1A1a_Public_Electricity&Heat_Production	Power stations	
	1A1b_Petroleum_Refining	Refineries - combustion	
	1A1ci_Manufacture_of_Solid_Fuels-coke	Coke production Solid smokeless fuel production	
	1A1cii_Other_Energy_Industries	Collieries - combustion Gas production Gas separation plant - combustion Nuclear fuel production Offshore oil and gas - own gas combustion Town gas manufacture	
	1B1ai_Post-Mining_Activities	Coal storage and transport	
	1B1ai_Underground_Mines	Closed Coal Mines Deep-mined coal	
	1B1aii_Surface_Mines	Open-cast coal	
	1B1b_Solid_Fuel_Transformation	Coke production Iron and steel - flaring Solid smokeless fuel production	
	1B2ai_Oil_Exploration	Offshore oil and gas - well testing	
	1B2aii_Oil_Production	Offshore oil and gas - processes	
	1B2aiii_Oil_Transport	Crude oil loading from offshore facilities Crude oil loading from onshore facilities	
	1B2aiv_Refining/Storage	Oil terminal storage Petroleum processes	
	1B2bii_Transmission/Distribution	Gas leakage	
	1B2ciii_Flaring	Offshore oil and gas - flaring	
	1B2ciii_Venting	Offshore oil and gas - venting	
	2A3_Limestone_&_Dolomite_Use	Power stations - FGD	
	Industrial Process	1A2a_Manufacturing_Industry&Construction:I&S	Sinter production
		2A1_Cement_Production	Cement - decarbonising
		2A2_Lime_Production	Lime production - decarbonising
2A3_Limestone_&_Dolomite_Use		Basic oxygen furnaces Glass - general Sinter production	
2A4_Soda_Ash_Production_&_Use		Glass - general	
2A7_(Fletton_Bricks)		Brick manufacture - Fletton	
2B1_Ammonia_Production		Ammonia production - feedstock use of gas	
2B2_Nitric_Acid_Production		Nitric acid production	
2B3_Adipic_Acid_Production		Adipic acid production	
2B5_Chemical_Industry_Other		Chemical industry - ethylene Chemical industry - general Chemical industry - methanol	
2C1_Iron&Steel		Electric arc furnaces Iron and steel - flaring Ladle arc furnaces	
2C3_Aluminium_Production		Primary aluminium production - general Primary aluminium production - PFC emissions	
2C4_Cover_gas_used_in_Al_and_Mg_foundries		Magnesium cover gas	
2E1_Production_of_Halocarbons_and_Sulphur_Hexafluoride		Halocarbons production - by-product	
2E2_Production_of_Halocarbons_and_Sulphur_Hexafluoride		Halocarbons production - fugitive	
3_Solvent_and_Other_Product_Use		Solvent use	
Public		1A4a_Commercial/Institutional	Public sector combustion
Waste Management		6A1_Managed_Waste_Disposal_on_Land	Landfill
		6B2_Wastewater_Handling	Sewage sludge decomposition
	6C_Waste_Incineration	Incineration Incineration - chemical waste Incineration - clinical waste Incineration - sewage sludge	

Table 12: Sectoral details, methodologies and data sources

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Key
D (IPCC default)
CR (CORINAIR)
CS (Country Specific)
PS (Plant Specific)
OTH (Other)

NC category	IPCC category	Category name	Methodology	Emission factors						Summary of activity/emissions data sources
				CO2	CH4	N2O	HFCs	PFCs	SF6	
Energy Supply	1A1a	Power stations	Emission factor * activity	CS	CR, CS, D	CS, D, PS				DUKES, plant operator and EUE TS data
	1A1b	Refineries	Emission factor * activity	CS	CR	D				DUKES
	1A1c	Manufacture of solid fuels and other energy industries	Emission factor * activity	CS	CR, CS	CS, D				DUKES
	1B1a	Coal mining	Emission factor * activity for active mines; modelled for closed mines			CS, OTH				DUKES and White Young Green
	1B1b	Solid fuel transformation	Carbon balance approach	OTH	OTH	OTH				DUKES
	1B2a	Fugitive emissions from oil production	Emission factor * activity; operator reported emissions	CS, PS	CS, PS	CS, PS				DUKES and EEMS
	1B2b	Fugitive emissions from gas production	Modelled (natural gas leakage); operator reported emissions (offshore activities)	CS	CS					Gas operators, EEMS
	1B2c_Flaring	Fugitive emissions from oil and gas production	Operator reported emissions	CS	CS	CS				EEMS
	1B2c_Venting	Fugitive emissions from oil and gas production	Operator reported emissions	CS	CS	CS				EEMS
	2A3	Power station flue gas desulfurisation	Emission factor * activity	CS, D						UK Minerals Yearbook and PI data
Transport	1A3a	Civil Aviation	Model based on CAA data and DUKES	CS	CR, D	D				Civil Aviation Authority, DUKES
	1A3b	Road Transportation	Modelled	CS	CS	CS				DUKES, DTI
	1A3c	Railways	Emission factor * activity	CS	CR	CR				Transisra LGDC, ORR National Rail Trends Yearbook
	1A3d	Navigation	Emission factor * activity	CS	CR	D				DUKES
	1A3e	Other Transportation	Modelled	CS	CR	D				DUKES, AEA off road model
	1A4a	Commercial/Institutional Other Mobile	Emission factor * activity	CS	CR, CS, D	CS, D				DUKES
Residential	1A4b	Residential combustion	Emission factor * activity	CS	CR, CS, D	CS, D				DUKES
	2B5	Chemical Industry - Other - breakdown of non aerosol consumer products	Emission factor * activity	CS, OTH						DUKES; Sales data from CTPA
	2F4	Consumption of Halocarbons and SF6 - Aerosols and Metered Dose Inhalers	Modelled				CS			British Aerosols Manufacturers Association; MDI Import/Export data from manufacturers
	6C	Waste Incineration - accidental vehicle fires	Emission factor * activity	CS	CR, CS, D					AEA estimate based on OOMP statistics
	1A2a	Industrial combustion - iron and steel	Emission factor * activity	CS	CR, CS	CR, CS				DUKES
Business	1A2b	Industrial combustion - other industry sectors	Emission factor * activity (stationary sources); modelled (mobile sources)	CS	CR, CS, D	CS, D				DUKES, Plant operators and industry data, AEA off road model
	1A4a	Commercial/Institutional combustion	Emission factor * activity	CS	CR, CS, D	CS, D				DUKES
	2B5	Chemical Industry - Other - energy recovery	Emission factor * activity	CS, OTH						DUKES Pollution Inventory, BCA
	2F1	Consumption of Halocarbons and SF6 - Refrigeration and Air-Conditioning	Modelled				CS	CS		Based on sales data from the British Refrigeration Association and consultation with stakeholders
	2F2	Consumption of Halocarbons and SF6 - Foam Blowing	Modelled							Estimates supplied by Caleb Management Services
	2F3	Consumption of Halocarbons and SF6 - Fire Extinguishers	Modelled				CS	CS		March (1999), Fire Industry Council, updated based on stakeholder consultation with ASSURE
	2F5	Consumption of Halocarbons and SF6 - Solvents	Modelled				CS	CS		Harrnisch and Schwarz, 2003
	2F9	Consumption of Halocarbons and SF6 - Semiconductors, Electrical Equipment, Sporting Goods and One Component Films	Modelled				CS	CS	CS	UKNEAC (semiconductors), BEFAMA and the Electricity Association (electrical equipment); Sales data reported by the manufacturer (sporting goods); Harrnisch and Schwarz, 2003 (one component films)
	1A4a	Commercial/Institutional	Emission factor * activity	CS	CR, CS, D	CS, D				DUKES
	Industrial Process	1A2a	Manufacturing Industries and Construction: I&S	Carbon balance approach	CS	CR, CS, D	CR, CS			
2A1		Mineral Products: Cement Production	Emission factor * activity	CS	CR, CS	CR, CS				UK Minerals Yearbook, British Cement Association, EU ETS
2A2		Mineral Products: Lime Production	Emission factor * activity	CS						UK Minerals Yearbook
2A3		Mineral Products: Limestone and Dolomite Use	Emission factor * activity	CS, D						ISSB Annual Statistics - Industry data
2A4		Mineral Products: Soda Ash Production and Use	Emission factor * activity	CS						AEA estimate based on industry data
2A7		Mineral Products: Flatton Bricks	Calculated, based on operator reported emissions data and brick production statistics	CS	CS					AEA estimate based on ONS data; Pollution Inventory
2B1		Chemical Industry - Ammonia Production	Calculated, based on operator reported data on CO2 produced, emitted and sold.	CS						Plant Operators data
2B2		Chemical Industry - Nitric Acid Production	Operator reported data				CS			Plant Operators data, Pollution Inventory
2B3		Chemical Industry - Adipic Acid Production	Operator reported data				CS			Industry data, via personal communication
2B5		Chemical Industry - Other	Calculated, based on operator reported emissions and plant capacity data.	CS	CS					AEA estimates based on plant capacity
Agriculture	2C1	Metal Production - Iron and Steel Production	Carbon balance approach	CS	CR	CR, D				DUKES, ISSB Annual Statistics
	2C3	Metal Production - Aluminium Production	Emission factor * activity; operator reported data	CS						UK Minerals Yearbook, AEA estimates, Pollution Inventory
	2C5	Metal Production - Other, Magnesium cover gas	Modelled; Operator reported data				CS	PS		Data reported via the Pollution Inventory and direct to AEA
	2E	Production of Halocarbons and SF6 - By-Product and fugitive emissions	Operator reported data				CS	PS		Data reported via the Pollution Inventory and direct to AEA
	1A4c	Other Sectors - Agriculture/Forestry/Fisheries	Emission factor * activity (stationary sources); modelled (mobile sources)	CS	CR, CS, D	CS, D				DUKES, AEA estimates
	2B5	Chemical Industry - Other: Breakdown of pesticides	Emission factor * activity	CS, OTH						British Agrochemicals Association, Crop Protection Association
	4A1	Enteric Fermentation - Cattle	Tier 2 Emission factor * activity		CS, D					Defra Economics and Statistics Group - June Census and Devolved Administrations
	4A3	Enteric Fermentation - Sheep	Tier 2 Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations
	4A4	Enteric Fermentation - Goats	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations
	4A6	Enteric Fermentation - Horses	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations
4A8	Enteric Fermentation - Swine	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4A10	Enteric Fermentation - Other (Deer)	Tier 2 Emission factor * activity		CS, D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B1	Manure Management - Cattle	Tier 2 Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B3	Manure Management - Sheep	Tier 2 Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B4	Manure Management - Goats	Emission factor * activity		CS	D				Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B6	Manure Management - Horses	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B8	Manure Management - Swine	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B9	Manure Management - Poultry	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B10	Manure Management - Other (Deer)	Emission factor * activity		CS	D				Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B12	Manure Management - Liquid Systems	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B13	Manure Management - Solid Storage and Dry Lot	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4B14	Manure Management - Other AWMs	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4D	Agricultural Soils	Emission factor * activity		D					Defra Economics and Statistics Group - June Census and Devolved Administrations	
4F1	Field Burning of Agricultural Residues - Cereals	Emission factor * activity		D					MAFF	
4F5	Field Burning of Agricultural Residues - Other	Emission factor * activity		D					MAFF	
Land Use Change	5A1	Forest Land remaining	Forest Land							
	5A2	Land converted to Forest Land	Modelled							Forestry Commission planting statistics, compiled wildfire activity data, FC guidelines on N fertilisation
	5B1	Land converted to Cropland	Modelled (carbon stock changes), emission * activity (wildfires, N2O from N fertilisation)	CS	CS					Published scientific data, mineral extraction statistics from ONS
	5B2	Land converted to Cropland	Modelled, emission*activity (liming)	CS						Derived from Countryside Survey
	5C1	Grassland remaining	Grassland							mineral extraction statistics from ONS
	5C2	Land converted to Grassland	Modelled, emission*activity (liming)	CS	CS	CS				Derived from Countryside Survey, land use change statistics from DCLG
	5D1	Wetlands remaining	Wetlands							
	5D2	Land converted to Wetlands	Modelled, emission*activity (biomass burning)							not reported
	5E1	Settlements remaining	Settlements							not reported
	5E2	Land converted to Settlements	Modelled, emission*activity (biomass burning)	CS						Derived from Countryside Survey, land use change statistics from DCLG
Waste Management	6F1	Other Land remaining	Other Land							
	6F2	Land converted to Other Land	Other Land							not reported
	6F3	Land converted to Other Land	Other Land							not reported
	6G	Other	Other							not reported
Waste Management	6A1	Solid Waste Disposal on Land - Managed	Modelled		CS					Derived from Forestry Commission planting statistics, land use change statistics from DCLG
	6B2	Wastewater Handling - Domestic and Commercial	Modelled		CS	D				HELMod UK model
	6C	Wastewater	Emission factor * activity	CS	CR, CS	D				Hobson (1996); ONS; Defra HMP, DTI, Pollution Inventory